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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,542	04/19/2004	William E. McKinzie III	42372-00046	3879
33123	7590	02/22/2006		
HELLER EHRMAN LLP 4350 LA JOLLA VILLAGE DRIVE #700 7TH FLOOR SAN DIEGO, CA 92122				
			EXAMINER HAM, SEUNGSOOK	
			ART UNIT 2817	PAPER NUMBER

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

HA

**Office Action Summary**

Application No.

10/828,542

Applicant(s)

MCKINZIE, WILLIAM E.

Examiner

Seungsook Ham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14/14/05 and 1/9/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26, 29, 31-40 and 42-78 is/are pending in the application.
- 4a) Of the above claim(s) 44-46 and 49-67 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26, 29, 31-40, 42, 43, 47, 48 and 68 is/are rejected.
- 7) ☒ Claim(s) 69-78 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/16/05, 1/9/06</u>  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Election/Restrictions*

Newly submitted claims 44-46, and 49-67 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

The newly added claims drawn to an apparatus for suppressing electromagnetic interference (class 333, subclass 12, and see figure 25), which is a different embodiment from the original invention recited in claims 1-41. It should be noted that the original invention recited in claims 1-41 are related to a cluster **resonator structure** (see figs. 21 and 22). The newly added claims introduce the different embodiment (fig. 25) that discloses an apparatus for suppressing electromagnetic interference (i.e., no cluster resonator structure is claimed).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 44-46 and 49-67 have been withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### *Claim Objections*

Claim 31 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claim 31 has not been further treated on the merits.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-26, 29, 31-40, 42, 43, 47, and 48 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 10-39 of copending Application No. 10/796,398. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims are the same except in semantics. For example, "a cluster of vias" in the instant claim 1 is read on "a plurality of resonators" in copending claim 10. Moreover, "third plane" and "fourth plane" in the instant claim 1 is read on "a plane" in the copending claim 10.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 7, 9, 10, 12-16, 42, 47, and 68 are rejected under 35 U.S.C. 102(b) as being anticipated by Devoe et al. (US '352).

Regarding claims 1-4, 7, 9, 10, 12-16, 42 and 47, Devoe et al. (fig. 16) discloses a cluster of vias comprising: first and second conducting planes 58; a cluster of vias 52 of essentially uniform length oriented substantially normal to the conducting planes and interposed therebetween; a first conducting pad 54 (the upper internal metallization) disposed in a third plane (the upper plane that has internal metallization 54) parallel and capacitively coupled to the first conducting plane 58 (the top plane) and coupled with the vias of the cluster of vias proximate their first ends; a second conducting pad 54 (the lower internal metallization) disposed in a fourth plane (the lower plane that has the lower internal metallization 54) parallel and capacitively coupled to the second conducting plane 58 (bottom plane) and coupled with the vias of the cluster of vias proximate their second ends. It should be noted that the preamble, "a cluster resonator" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Regarding claim 2, the each vias 52 inherently possesses inductance (i.e., conductive) and capacitively coupled with first and second conducting planes, thus, it inherently provides a resonant shunt circuit.

Regarding claims 3, and 4, Devoe et al. (fig. 16) shows the cluster of vias is disposed along an interior region (i.e., inside of the conducting plane 58), and also an interior vias (see fig. 7, small vias 13a or 13b) can be placed in the interior region of the cluster of vias (see fig. 15a).

The subject matter of claim 12 is inherent since the device of Devoe et al. is a symmetrical (i.e., balanced structure).

Regarding claims 13-16, Devoe et al. also teaches that the cluster of vias structure can be disposed on a printed circuit boards (i.e., multi-layered structure, col. 14, lines 20-27).

Regarding claim 68, Devoe et al. (fig. 1e) discloses a cluster via structure comprising: a first conducting plane (the top plane), a second substantially parallel conducting plane (the bottom plane); a first conducting pad disposed in a third parallel plane internal to the region between the first and second conducting planes (the second conducting plane in the middle of the structure); a first cluster of vias (the top portion of vias, not numbered) oriented substantially normal to the first conducting plane and first conducting pad and disposed therebetween, each via of the cluster being physically connected respectively to the first conducting plane and the first conductive pad; a second conducting pad disposed in a fourth parallel plane internal to the region between the first and second conducting planes (the third conducting plane in the middle of the

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structure); a second cluster of vias (the bottom portion of vias, not numbered) oriented normal to the second conducting plane and second conducting pad and disposed therebetween, each second vias is physically connected to the second conducting plane and second conducting pad; and wherein the first and second conducting pads are proximate and capacitively coupled to each other (col. 15, lines 33-36).

It should be noted that the preamble, "a cluster resonator" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Moreover, even if such preamble is considered, it is inherent that the vias structure inherently possesses a resonant characteristic since each conductive vias inherently possesses inductance and the capacitance is provided between the first and second conducting pads (i.e., the capacitance between the second and third conductive planes).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Devoe et al. (US '352).

Placing the cluster of vias in a circular, polygonal or elliptical path is considered as an obvious modification in order to achieve a desire signal path.

#### ***Allowable Subject Matter***

Claims 69-78 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

Applicant's arguments with respect to claims 1-26, 29, 31-40, 42, 43, 47, 48 and 68-78 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any



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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seungsook Ham whose telephone number is (571) 272-2405. The examiner can normally be reached on Monday-Thursday, 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Seungsook Ham  
Primary Examiner  
Art Unit 2817

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